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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of San Diego Gas & Electric Company (U 902-E) for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink Transmission Project	Application No. 06-08-010 (Filed December 14, 2005)

MOTION BY UTILITY CONSUMERS' ACTION NETWORK TO COMPEL SDG&E TO UPGRADE ITS IMPORT CAPABILITY AT MIGUEL SUBSTATION

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June 5, 2007

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of San Diego Gas & Electric Company (U 902-E) for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink Transmission Project	Application 06-08-010 (Filed August 4, 2006)

UCAN'S MOTION TO COMPEL SDG&E TO UPGRADE ITS IMPORT CAPABILITY AT MIGUEL SUBSTATION

Pursuant to the Commission's Rules of Practice and Procedure Rule 11.3, Utility Consumers' Action Network ("UCAN") requests the Commission order SDG&E to upgrade the Miguel import capability to 1900 Mw on a full-time basis. Ideally, this should be done immediately by use of a RAS.

As a result of the examination of SDG&E's transmission system conducted by UCAN, UCAN's expert witness in the case – Mr. David Marcus -- concluded that the Commission should order SDG&E to upgrade the Miguel import capability to 1900 Mw on a full-time basis. He has concluded that this can and should be done immediately by use of a RAS. Reducing congestion at Miguel will mean lower locational marginal prices (LMPs) for every kwh consumed in the SDG&E service area in the hours when it occurs. Reduced LMPs are the primary claimed energy benefit of Sunrise, and a Mw of increased IV-Miguel transfer capability is just as valuable (for dispatch and LMP savings) as a Mw of IV-Central capacity. Mr. Marcus' suggestion is contained in his testimony distributed in this case on June 1st and in the attached Affidavit of David Marcus (See Attachment "A").

UCAN brings this motion because it believes that by taking action this year as opposed until awaiting the completed litigation (and potential appeals) of the Sunrise application, the Commission will enable CAISO ratepayers to save money starting in 2008. By 2010, the savings would be $12.1 million, per SDG&E modeling. Given the very real possibility that a decision will not be issued until mid 2008 and not finalized for years thereafter, this motion is the best vehicle by which the Commission can consider an immediate step that should be taken which imposes no costs on SDG&E and substantial benefits to the state's ratepayers.

Ordinarily, the Commission would expect SDG&E to take this step on its on volition. However, UCAN believes that this motion is necessary because of the

SDG&E's conflict of interest in this matter.   Through the discovery process, it has become apparent that SDG&E will be resistant to this proposal. UCAN submits that SDG&E will reject UCAN's recommendation to perform this obvious and no-cost upgrade as SDG&E would view it as having a detrimental impact upon the urgency of SDG&E's need for its proposed Sunrise Transmission project to be operational by 2010. Without Commission intervention, it is unlikely that SDG&E will take this step to save the state's ratepayers significant amounts of money.

For these reasons, UCAN requests that the Commission issue an ruling compelling SDG&E to upgrade its import capability at Miguel this year rather than waiting for the completion of this proceeding.

Dated: June 5, 2007

Respectfully submitted,

________/s/_________
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PROOF OF SERVICE

I, Laura Impastato declare: I am employed in the City and County of San Diego, California. I am over the age of 18 years and am not a party to this action. No service list has been established in this proceeding. On June 5, 2007, I served the Motion to Compel upon the parties by sending a true and correct copy thereof, addressed as shown on the parties listed on the following page via e-mail. Pursuant to Rule 44.3, I have sent a copy of this protest via e-mail to each person the application lists used by Applicants as being authorized to receive service.

_____________/s/_____________
Laura Impastato

ATTACHMENT "A"

AFFIDAVIT OF DAVID MARCUS

1. I, David Marcus, hereby declare that I am an expert on transmission matters. I make this declaration to the best of my personal knowledge, information and belief of the facts stated herein. I am personally aware of the facts herein and if called upon as a witness, I would and could testify competently to the information contained herein

2. After intense examination of SDG&E's transmission system, I've determined that If the Miguel import capability could be increased to 1900 Mw in all hours, rather than being normally constrained to between 1450 and 1750 Mw, there would be large economic benefits from doing so. SDG&E's modeling shows imports at Miguel will be frequently limited if Sunrise is not built.[1] SDG&E projects that increased renewable generation in the Imperial Valley will displace Sempra and Intergen generation near Mexicali which is needed to allow imports at Miguel to go above 1450 Mw,[2] while simultaneously increasing the frequency of hours in which more than 1450 Mw of generation is available for transfer over the IV-Miguel line.[3]

3. For that reason, I've concluded that the Commission should order SDG&E to upgrade the Miguel import capability to 1900 Mw on a full-time basis. Ideally, this should be done immediately by use of a RAS. Reducing congestion at Miguel will mean lower locational marginal prices (LMPs) for every kwh consumed in the SDG&E service area in the hours when it occurs. Reduced LMPs are the primary claimed energy benefit of Sunrise[4], and a Mw of increased IV-Miguel transfer capability is just as valuable (for dispatch and LMP savings) as a Mw of IV-Central capacity. SDG&E is already planning to add a new 500/230 kV transformer at the IV substation to increase the amount of generation deliverable onto the IV-Miguel line; if it makes sense to add a transformer at IV to get power on to SWPL, than it should also make sense to make changes at Miguel to get power off of SWPL into SDG&E's local grid.

4. I make this recommendation independent of whether Sunrise gets built or not.

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[1] SDG&E, response to UCAN DR15-17b.

[2] According to SDG&E, the annual output of the Sempra and Intergen powerplants in Mexico will fall from 2500 gwh in 2010 to 1310 gwh by 2015, without Sunrise, and a little lower if Sunrise is built. It will rebound to 1539 gwh in 2020 without Sunrise, but only 1342 gwh in 2020 with Sunrise. See SDG&E response to UCAN DR9-15, data for Cases 240 (AMI) and 241 (AMI + Sunrise). According to the ISO, the Sempra and Intergen plants have a combined capacity of about 1100 Mw. ISO, 5/11 CD to UCAN. The gwh output numbers therefore correspond to annual capacity factors of approximately 26 percent in 2010, 13-14 percent in 2015, and 14-16 percent in 2020. These are extraordinarily low numbers for combined cycle plants.

[3] SDG&E's response to DR 15-17b (Case 240) shows the number of hours with flows on IV-Miguel at 1450 Mw or above increases from 375 in 2010 to 1020 in 2015.

[4] SDG&E's GridView results show relatively small changes in the location or quantity of energy generation – the claimed large dispatch savings from Sunrise which are shown in GridView are predominantly due to changes in LMPs and not access to cheaper resources that would otherwise have been unavailable. See, for example, the UCAN testimony regarding the quantity of renewable generation in the Imperial Valley, and how it is only minutely affected by the presence or absence of Sunrise.

5. SDG&E has modeled the effect of removing the Miguel nomogram import constraint (while leaving in place the Miguel outlet constraint of 1900 Mw).[5] SDG&E's analysis shows that increasing the Miguel import capacity to 1900 Mw around-the-clock, and changing nothing else, would reduce CAISO ratepayer costs by $12.1 million in 2010 and $42.8 million in 2015.[6] Presumably, if SDG&E's numbers are realistic, upgrading the Miguel import capacity to 1900 Mw year-round would also save money in 2008 and 2009.

6. The IV-Miguel 500 kV transmission line has a rated normal capacity of approximately 2250 Mw.[7] The two transformers have normal limits of about 1125 Mw each, which means they can also handle up to 2250 Mw on a combined basis. However, SDG&E is never able to use this full capacity. Currently, flows over the IV-Miguel line are limited to between 1450 and 1750 Mw.[8] If the Sempra and Intergen powerplants in northern Baja California near Mexicali are not operating, the import limit is 1450 Mw. When they are operating, every additional Mw of output from them causes a fraction of a Mw increase in the import capacity over the IV-Miguel line.[9]

7. The limits on flows over the IV-Miguel line are not caused by the 2250 Mw thermal limits on the transmission line and the two large transformers; they are imposed in anticipation of the consequences of an outage of one of the two Miguel 230/500 kV transformers. Because unplanned Miguel transformer outages are extremely rare,[10] the result is that Miguel import capacity over the IV-Miguel line is constrained in all hours of the year in anticipation of events that happen extremely infrequently.

8. The 1450-1750 Mw import limit at Miguel is driven by the risk that, without the import limit, an outage of one 230/500 kV transformer at Miguel would cause the adjacent transformer to exceed its emergency rating. One very simple method to avoid this risk is to simply plan in advance that, if imports are above the current import limit (which varies hourly between 1450 Mw and 1750 Mw), and one transformer fails, then the other one will be automatically tripped as well. This is called sequential tripping. SDG&E admits that this "seems likely" to work, but declares a preference for avoiding such post-contingency protection methods.[11]

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[5] The basis for eliminating the import nomogram in SDG&E's modeling was the construction of a third 500/230 KV transformer at Miguel. UCAN believes the nomogram can be eliminated much more cheaply, with a RAS. How the nomogram is eliminated affects the **cost** of elimination, but should have only a negligible effect on the **benefits** of doing so.

[6] SDG&E, corrected response of 5/8/07 to UCAN DR17-15d. The 2015 value is an $11 million increase from the number SDG&E had supplied to UCAN less than two weeks earlier. These values are in year 2005 dollars. The same data response claims that increasing the import capability at Miguel in 2020 would **increase** CAISO ratepayer costs by $3.3 million. Such an outcome is utterly counter-intuitive, and casts considerable doubt on the validity of SDG&E's 2020 GridView data base. In any case, if it became apparent that the presence of a sequential tripping operating procedure for the Miguel transformers was causing an increase in rates the solution would be simple: simply abandon the operating procedure and go back to the procedure in force today. Thus, the UCAN proposal can only save money, and not lose it.

[7] SDG&E, response to UCAN DR7-12a.

[8] SDG&E, attachment to 5/25/07 response to UCAN DR24-1.

[9] The actual fraction is reported in confidential SDG&E operating procedures supplied in SDG&E's response to UCAN DR 7-119 and/or in CAISO confidential operating procedure T-132.

[10] SDG&E's confidential response to UCAN DR 13-4 shows under 9 hours over the last 11 years when either or both of the Miguel transformers were on forced outages.

[11] SDG&E, response to UCAN DR 15-21c.

9. As I indicate in my testimony in this proceeding, SDG&E has proposed doing exactly the same thing if an IV-Miguel outage occurs.[12] So UCAN is proposing no more than what SDG&E anticipates doing itself for Sunrise, and what SDG&E has unintentionally already done in the past.

10. SDG&E's desire to avoid adding complexity to the operation of its system is understandable, but ignores economic considerations. If imports into Miguel were rarely constrained, SDG&E's point would be valid. But SDG&E projects that there will be 400-1400 hours per year in the 2010-2020 period when imports to Miguel will be constrained if Sunrise is not built,[13] and presumably many such hours in 2008-09 as well. Modifying Miguel transformer operations could thus save millions of dollars almost immediately, more than covering the cost of implementation of a more complex operating procedure that would need to be used an average of less than once per year.[14]

11. Implementing a policy of dropping the second transformer for loss of the first, albeit only when imports through Miguel are above the 1450 Mw level, would simply return SDG&E to the position it was in before the second Miguel transformer was added in 2004. Before that, loss of one Miguel transformer, at any import level, was equivalent to loss of the Miguel-IV transmission line. Since the SDG&E system is already designed to cope with the loss of the Miguel-IV line, it could also cope with the cross-tripping of the second Miguel transformer after loss of the first. It already did so when there was a simultaneous forced outage of both transformers.[15] Thus, the cost of increasing the import limit across the Miguel transformers to 1900 Mw is basically zero.[16]

12. All power flowing into Miguel over SWPL passes through the two 230/500 kV transformers at Miguel, and it then flows out from the Miguel 230 kV bus over 230 kV lines, 230/69 kv transformers, or a 230/138 kV transformer. SDG&E plans a second 230/138 kV transformer by 2010.[17] Under normal conditions, these facilities have more than enough transfer capability to handle any level of inflow into Miguel from the 500 kV system. However, in anticipation of certain contingencies, SDG&E restricts outflows from Miguel to 1900 Mw.[18]

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[12] SDG&E, response to DR4-31, confidential "SDG&E Import Capability Study Report for 2010," p. 23.
[13] SDG&E response to UCAN DR15-17b, Case 240 (AMI and CTs, but no Sunrise).
[14] SDG&E's confidential response to UCAN DR13-4 indicates that their have been only 3 500/230 kV transformer forced outages at Miguel for an average of 3 hours each over the last decade, one of which involved both transformers at once.
[15] SDG&E, confidential response to UCAN DR13-4.
[16] The actual cost would be the cost to implement a sequential tripping plan. SDG&E has assumed such a plan for both the Miguel transformers and the Central transformers if Sunrise is built (response to CUE DR4-31) but has not included any cost for it. UCAN has followed SDG&E's lead.
[17] SDG&E, response to UCAN DR4-31. The second 230/138 kV transformer at Miguel is apparently needed to enable Sunrise to provide the planned 1000 Mw increase in SDG&E's emergency import capability. However, it is also apparently needed for non-Sunrise reasons, since it is not listed as a Sunrise-related cost in Chapter V of SDG&E's 8/4/06 testimony. Thus, UCAN's testimony assumes that the second 230/138 kV transformer, and the associated looping of the South Bay-Los Coches 138 kV line into Miguel, will occur whether or not Sunrise is built.
[18] SDG&E, confidential response to DR7-119. The outflow limit currently represents the sum of flows into Miguel from both SWPL and the Miguel-Tijuana 230 kV line. SDG&E, attachment to response to UCAN DR24-1, p. 15. After 2007 the Tijuana-Miguel line line will be converted to a Tijuana-Otay Mesa line and there will no longer be any normal power flow from Tijuana into Miguel. SDG&E agrees that at that point flows on the Tijuana-Otay Mesa line "should not be counted against the 1900 MW North of Miguel Limit." SDG&E, response to UCAN DR15-34.

13. By taking action this year as opposed until awaiting the completed litigation (and potential appeals) of the Sunrise application, the Commission will enable CAISO ratepayers to save money starting in 2008. By 2010, the savings would be $12.1 million, per SDG&E modeling.

14. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 5th day of June, 2007 at San Diego, California.

/s/
DAVID MARCUS
Declararant

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